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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,446	02/10/2004	Toshio Yamagiwa	0505-1267P	1682
2292	7590	08/16/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			BELLINGER, JASON R	
			ART UNIT	PAPER NUMBER
			3617	

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/774,446	Applicant(s) YAMAGIWA ET AL.	
	Examiner Jason R. Bellinger	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 7-10 and 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 11-15 is/are rejected.
- 7) ☒ Claim(s) 6 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claims 1 and 11 are objected to because of the following informalities: The phrase "in a tire pressure sensing system" should be removed from lines 1-2 of the claims, due to the fact that this phrase is redundant and does not further describe the invention. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
3. Claims 2-5 and 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 12 are indefinite due to the fact that it is unclear how the recessed portion has a shape "recessed toward" the hub. No directional identifiers (i.e. radially, axially, etc.) have been provided to clearly define this limitation.

Claims 3-4 and 13-14 are indefinite due to the fact that it is unclear what is actually being claimed. It is unclear whether the air pressure sensor is mounted on the opposite side of the wheel with respect to the air valve, or whether the air pressure sensor is mounted on the interior surface of the wheel while the air valve is mounted on the exterior surface of the wheel in the same location.

Claims 5 and 15 are indefinite due to the fact that it is unclear what element of the invention includes "a side" on which the air pressure sensor is placed 180 degrees from the air valve.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2 and 11-12 are rejected under 35 U.S.C. 103(a) as being obvious over Bunya et al in view of Sheikh-Bahaie.

The applied reference has a common Bunya et al with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer

Art Unit: 3617

in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Bunya et al shows a cast wheel 25 including a tire pressure sensing system 41 is mounted on the wheel 25 to sense the pressure of a tire 26 mounted thereon. The wheel 25 includes a rim portion 53 having a recessed portion 54 that extends towards the hub of the wheel 25. An air pressure sensor 41 is mounted within the recess portion 54. The central part of the outer surface 51a of the air pressure sensor is exposed and faces radially outward toward the interior of the tire 26. The central part of the inner surface of the air pressure sensor 41 is separated by a space from the radially inward portion 54b of the wheel 25.

Bunya et al does not show the wheel including spoke portions connecting the rim portion to a hub portion, where the recess is located in the border between the rim and spoke. Sheikh-Bahaie teaches the use of a wheel including a rim 12 that is connected to a hub through spokes. An air pressure sensor 14 is located on the rim 12 in the vicinity of a spoke. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the wheel of Bunya et al as a spoke wheel, for the purpose of decreasing the weight of the wheel.

The air pressure sensor 41 of Bunya et al could then be located in a recess 54 located at the boundary between the rim and spoke and extend into the radially outward end of the spoke (as taught by Sheikh-Bahaie), in order to provide reinforcement for the sensor, thus preventing damage to the sensor due to vibration, etc.

Allowable Subject Matter

6. Claims 3-5 and 13-15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. Claims 6 and 16 would be allowable if rewritten to overcome the objection(s) set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 9 March 2006 have been fully considered but they are not persuasive. The Applicant argues that Bunya et al merely shows the sensor 41 directly mounted on the rim, thus not showing the inner surface of the sensor being radially spaced from the wheel. It should be noted that Bunya et al does indeed meet the limitations of the claims, given the fact that Bunya et al states that R2 (the radius of the radially outer surface 54b of the recess of the wheel) is less than or equal to R3 (the radius of the radially inner surface of the sensor 41). See column 5, lines 14-18.

Art Unit: 3617

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Sanchez et al reference was previously relied upon in the Office Action 8 August 2005, but never cited on a PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 571-272-6680. The examiner can normally be reached on Mon - Thurs (9:00-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason R Bellinger
Primary Examiner
Art Unit 3617



8/14/06